

A thin wall saw blade for cutting hard materials both clean and fast without clogging comprises a corrugated shaped electro-deposited matrix metal that encapsulate large diamonds so that the large diamonds have points or protrusions extending outward from the thin walls of the corrugated saw blade. The thin wall saw blade further includes small diamonds encapsulated inside the matrix metal. The density of the large and small diamonds by volume exceeds fifty percent so that the blade cuts fast and clean without clogging and is particularly well suited for singulating multi-layered substrates that include plastic and/or metal layers in or on the substrate.